**Prevalence of PCOS And Identifying Health Patterns Associated with PCOS carried out by EtiniAbasi**

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**INTRODUCTION**

This project focuses on descriptive and exploratory analysis on the dataset to uncover patterns and trends in patients diagnosed with Polycystic Ovary Syndrome (PCOS). This project aims to better understand how various lifestyle and medical factors intersect with PCOS, while answering important questions that could be asked such as the prevalence of PCOS, its relationship with factors like BMI, and potential predictive indicators.

OBJECTIVE:

To identify patterns, trends, and correlations related to PCOS in patients, using Excel for data exploration and visualization.

DATASET DESCRIPTION

The dataset is made up of information on various female patients and has features such as patient demographic, lifestyle factors as well as medical and hormonal indicators

Size of the Dataset

* Total Rows: 541 (number of patients)
* Total Columns: 43 (number of features)

Source: [Polycystic ovary syndrome (PCOS)](https://www.kaggle.com/datasets/prasoonkottarathil/polycystic-ovary-syndrome-pcos)

KEY QUESTIONS

1. What percentage of the dataset is diagnosed with PCOS?
2. Are there significant age groups more prone to PCOS? If so, what is the age distribution among PCOS patients?\*
3. What is the average BMI of patients diagnosed with PCOS compared to those without PCOS?
4. How does regular exercise affect the likelihood of having PCOS?
5. Does diet (e.g., frequency of fast food consumption) correlate with the diagnosis of PCOS?
6. Are there significant differences in lifestyle habits (e.g., exercise, sleep patterns) between PCOS and non-PCOS patients?
7. What is the relationship between BMI and the likelihood of being diagnosed with PCOS?
8. Is there a correlation between the AMH levels and PCOS diagnosis?
9. Are there any noticeable trends in menstrual cycle length or hormone levels based on the severity of PCOS symptoms?
10. How do PCOS patients compare with non-PCOS patients in terms of other health indicators, such as hormone levels, weight, and cycle length?
11. What are the significant health risk factors for PCOS patients, and how do they differ from other patients?

**DATA CLEANING**

Checking and removal of duplicates

Checking for null values

Formatting Column names

Replacing of Missing Values

Addition of Age Range table using formular

=IF(E2<=18, "Child", IF(E2<=35, "Young Adult", IF(E

FINDINGS

What percentage of the dataset is diagnosed with PCOS?

32.7% of Patients were diagnosed with PCOS

Are there significant age groups more prone to PCOS? If so, what is the age distribution among PCOS patients?

|  |  |
| --- | --- |
| **Age Group** | **No. of People with PCOS** |
| Middle Aged | 25 |
| Young Adult | 152 |
| **Grand Total** | **177** |

1. What is the average BMI of patients diagnosed with PCOS compared to those without PCOS?

Average BMI of patients with PCOS = 25.4

Average BMI of patients without PCOS= 23.7

This shows that PCOS patients usually have slightly higher BMIs

![](data:image/png;base64;base64,)

1. How does regular exercise affect the likelihood of having PCOS?
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5. Is there a correlation between the AMH levels and PCOS diagnosis?
6. Are there any noticeable trends in menstrual cycle length or hormone levels based on the severity of PCOS symptoms?
7. How do PCOS patients compare with non-PCOS patients in terms of other health indicators, such as hormone levels, weight, and cycle length?